

AMENDMENT TO CLAIMS

Please cancel claims 1 - 4, amend claims 5 - 13, and add new claims 14 - 21, as follows:

Claims 1 - 4 (canceled)

5. (currently amended) A method of testing a semiconductor device, including:

bringing a plurality of probes including a first ~~probe~~ and a second ~~probes probe~~ into contact with a plurality of electrode pads that ~~is are~~ disposed on a semiconductor device and connected each other with a conductive wiring;

connecting a first power supply to ~~at least one predetermined the~~ first probe of the ~~plurality of probes~~ and supplying a current or a voltage from the first probe through the electrode pads and the wiring to the second probe ~~to the semiconductor device~~;

measuring contact resistance between the electrode ~~pad pads~~ and the ~~probe probes~~ based on the current or the voltage supplied to the semiconductor device; and

judging whether the measured contact resistance is equal to or more than a predetermined value or not, and, when the contact resistance is less than the predetermined value, carrying out an electrical test of the semiconductor device.

6. (original) A method of testing a semiconductor device as set forth in claim 5, wherein when the semiconductor device is subjected to an electrical test, a second power supply that supplies a source potential is connected to each of the first probe and the second

probe, the source potential is supplied from the first probe and the second probe to the electrode pad, and thereby the test is carried out.

7. (currently amended) A method of testing a semiconductor device as set forth in ~~claim 5~~ claim 5, wherein when the semiconductor device is subjected to an electrical test, the first probe is connected to a second power supply that supplies a source potential, the second probe is non-connected to the second power supply, thereby the source potential is supplied from the first probe to the electrode pad, and thereby the test is carried out.

8. (original) A method of testing a semiconductor device as set forth in claim 6, wherein the first power supply and the second power supply are the same power supply.

9. (currently amended) A method of testing a semiconductor device as set forth in claim 5, wherein when the semiconductor device is subjected to an electrical test, a third power supply that supplies a ground potential is connected to each of the first probe and the second probe, thereby the ground potential is supplied from the first probe and the second probe to the electrode ~~pad~~ pads, and thereby the test is carried out.

10. (original) A method of testing a semiconductor device as set forth in claim 5, wherein when the semiconductor device is subjected to an electrical test, the second probe is connected to a third power supply that supplies a ground potential; the first probe is non-connected to the third power supply; the ground potential is supplied from the second probe to the electrode pad; and thereby the test is performed.

11. (original) A method of testing a semiconductor device as set forth in claim 5,

further including:

cleaning the plurality of probes when the measured contact resistance is judged to be equal to or more than a predetermined value; and

carrying out an electrical test of the semiconductor device with the cleansed probes.

12. (original) A method of testing a semiconductor device as set forth in claim 11, further including:

prior to bringing the probe into contact, disposing the semiconductor device on a supporting area in a prober having the supporting area that supports the semiconductor device and a cleaning area that cleanses the probe;

wherein the testing and the cleaning are carried out in a same prober.

13. (original) A method of testing a semiconductor device as set forth in claim 5, wherein the measuring the contact resistance is performed after a plurality of semiconductor devices are subjected to an electrical test.

14. (new) A method of testing a semiconductor device, comprising:

providing a semiconductor device having a plurality of power supply pads electrically connected to each other, and a probe device having a plurality of probes;

contacting the power supply pads with the probes so as to be electrically connected therebetween;

connecting one of the probes with a current source and another one of the probes with a ground;

measuring a contact resistance based on a voltage of the one of the probes connected to the voltage source; and

conducting a test of the semiconductor device when the measured contact resistance is less than a predetermined value.

15. (new) A method of testing a semiconductor device according to claim 14, wherein the probes are connected to a voltage source during the test of the semiconductor device.

16. (new) A method of testing a semiconductor device according to claim 15, wherein the voltage source supplies a power supply voltage.

17. (new) A method of testing a semiconductor device according to claim 15, wherein the voltage source supplies a ground voltage.

18. (new) A method of testing a semiconductor device, comprising:
providing a semiconductor device having a plurality of power supply pads electrically connected to each other, and a probe device having a plurality of probes;
contacting the power supply pads with the probes so as to be electrically connected therebetween;
connecting one of the probes with a voltage source and another one of the probes with a ground;
measuring a contact resistance based on a current of the one of the probes connected to the voltage source; and

conducting a test of the semiconductor device when the measured contact resistance is less than a predetermined value.

19. (new) A method of testing a semiconductor device according to claim 18, wherein the probes are connected to a voltage source during the test of the semiconductor device.

20. (new) A method of testing a semiconductor device according to claim 19, wherein the voltage source supplies a power supply voltage.

21. (new) A method of testing a semiconductor device according to claim 19, wherein the voltage source supplies a ground voltage.